

US EPA RECORDS CENTER REGION 5



513065

70540 I.I.



Field Book
E 64-8x4 W

50% cotton-content paper
water resistant surface
50 sheets . . . 4 $\frac{3}{4}$ " \times 7 $\frac{1}{4}$ "

CURVE FORMULAS

$$T = R \tan \frac{1}{2} I$$

$$T = \frac{50 \tan \frac{1}{2} I}{\sin. \frac{1}{2} D}$$

$$\sin. \frac{1}{2} D = \frac{50}{R}$$

$$\sin. \frac{1}{2} D = \frac{50 \tan \frac{1}{2} I}{T}$$

$$R = T \cot. \frac{1}{2} I$$

$$R = \frac{50}{\sin. \frac{1}{2} D}$$

$$E = R \csc. \sec \frac{1}{2} I$$

$$E = T \tan \frac{1}{4} I$$

$$\text{Chord def.} = \frac{\text{chord}^2}{R}$$

$$\text{No. chords} = \frac{I}{D}$$

$$\text{Tan. def.} = \frac{1}{2} \text{ chord def.}$$

The square of any distance, divided by twice the radius, will equal the distance from tangent to curve, very nearly.

To find angle for a given distance and deflection.

Rule 1. Multiply the given distance by .01745 (def. for r^o for 1 ft.) and divide given deflection by the product.

Rule 2. Multiply given deflection by 57.3, and divide the product by the given distance.

To find deflection for a given angle and distance. Multiply the angle by .01745, and the product by the distance.

GENERAL DATA

RIGHT ANGLE TRIANGLES. Square the altitude, divide by twice the base. Add quotient to base for hypotenuse.

Given Base 100, Alt. $10.10^2 + 200 = 5. 100 + 5 = 100.5$ hyp.

Given Hyp. 100, Alt. $25.25^2 + 200 = 3.125. 100 - 3.125 = 96.875$ = Base.

Error in first example, .002; in last, .045.

To find Tons of Rail in one mile of track: multiply weight per yard by π , and divide by 7.

LEVELING. The correction for curvature and refraction, in feet and decimals of feet is equal to $0.574 d^2$, where d is the distance in miles. The correction for curvature alone is closely, $\frac{2}{3}d^2$. The combined correction is negative.

PROBABLE ERROR. If d_1, d_2, d_3 , etc. are the discrepancies of various results from the mean, and if $\Sigma d^2 =$ the sum of the squares of these differences and n = the number of observations, then the probable error of the mean = $\pm 0.6745 \sqrt{\frac{\Sigma d^2}{n(n-1)}}$

MINUTES IN DECIMALS OF A DEGREE

1'	.0167	11'	.1833	21'	.3500	31'	.5167	41'	.6833	51'	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

INCHES IN DECIMALS OF A FOOT

$\frac{1}{16}$	$\frac{3}{32}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729
1	2	3	4	5	6	7	8	9	10	11

.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167
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Joe Gadowski 4/2/92

9/17/92

weir

A. E. Stanley SWOT

math

SWOT - sample station (over time)

Extractables

3- 2-802 A level 2 10:25 a.m.
Tag #5 Lot A 9180010

7-13-89 Seal Broken 7-92

STR# ELA 953

ELA 30 trip

Volatile Lot B 0330010

3- 2-48ML

10:59 a.m.

HCl

Metals H103
ZTR# MEAN V12

Tag #5

11 p.m. Lot C0037010

C level 1 2-9-98

11:03 a.m.

NaOH

11 p.m.

Seal Broken 1-7-92

Joe Gadowski 4/2/92

Joe Gadowski 4/21/92

VOA 40 mL Clear Vial
Lot BO 330018
12-18-90

Seal Order 1-7-92
QA BLevel 1

ELA 50 - VOA 12:26

TB01 2-40 mL ~~10/20/89 am~~
Trip blank for ELA 53 HCl

ELA 51 - VOA ~~10/20/89 am~~

TB02 2-40 mL ~~12:04~~.
Trip blank HCl

ELA 52 - VOA ~~10/20/89 am~~
~~2-40 mL~~
Trip blank

Joe Gadowski 4/21/92

Joe Gadowski 4/21/92

SWO2 sample 5.E of
station at intersection of
road
ELA 54
Extractables

Levett certification

→ 8002 am 10/21/92
G 214922616
A 12951 7-19-89
Seal 8-27-1990
Bldg 1-7-92

Extractable Tag #^s 11:32 a.m.

VOA HCl ~~10/20/89 am~~ 12:27

Lot C0037010
Metals MEGM13 11:39 am
HNO3

CN MEGMB 11:39 am
NaOH

Joe Gadowski 4/21/92

Joe Jadomski 4/2/92

SW03 dup SW02

ELA 55

Extractable 11:38 a.m.
2-902

VGA
2-48ml
HCl 12:28

Metals MEGN 14 11:40
HNO₃

CN⁻ 11:40 a.m.
NaOH

All water samples were
of normal appearance
Color - Clear/green

Joe Jadomski 4/2/92

Joe Jadomski 4/2/92

SW04 Field blank
DI water no bather required

ELA 56

Extractables 11:50

VGA HCl DBR 1206

Metals MEGN 15 11:47

HNO₃

CN 11:48

NaOH

Joe Jadomski 4/2/92

Joe Tadomski 4/2/92

5501 ~~AB100BP~~

Extractables — 12:53

8oz Lot F005801 8
(2gal) 3-5-90

Clean Seal/Border 1/1/92
ELA 57

VOA — 12:58

250ml —

Metals/CN = 13:03

8oz

MECN 16

black soil

Joe Tadomski 4/2/92

Joe Tadomski 4/2/92

5502 M 3 in SD

East of line with telephone pole and
Staley blog

Extractables ELA 58 100 ~~50~~ yards from
N/S road bt
station black soil

VOA

13:11p

Metals/CN
in ECR 17

13:12

Joe Tadomski 4/2/92

Joe Gadowski 4/2/92

5503

Orange like brown
Soil 1

Extractables

ELA 59

13:20

VFA

ELA 59

13:21

Metals/CN

MECN 18

13:23

80 yds from road

Joe Gadowski 4/2/92

Joe Gadowski 4/2/92

5504

—

120 yds
from road

Extractables

ELA 60

13:27

VFA

ELA 60

13:28

Metals/CN
MECN 19

13:29

Soil is gray to black
lighter than SS 02 and
SS 01

Joe Gadowski 4/2/92

Joe Gadowski 4/2/92 4/2/92 SW ditch area

3505 ~~088m~~ 20yds from
Elm road

Extractables
ELA61 - 13:36

VAA ELA61 13:37

Metals/CN
MEAN 20 13:36

Ditch sed sample

Joe Gadowski 4/2/92

Joe Gadowski 4/2/92

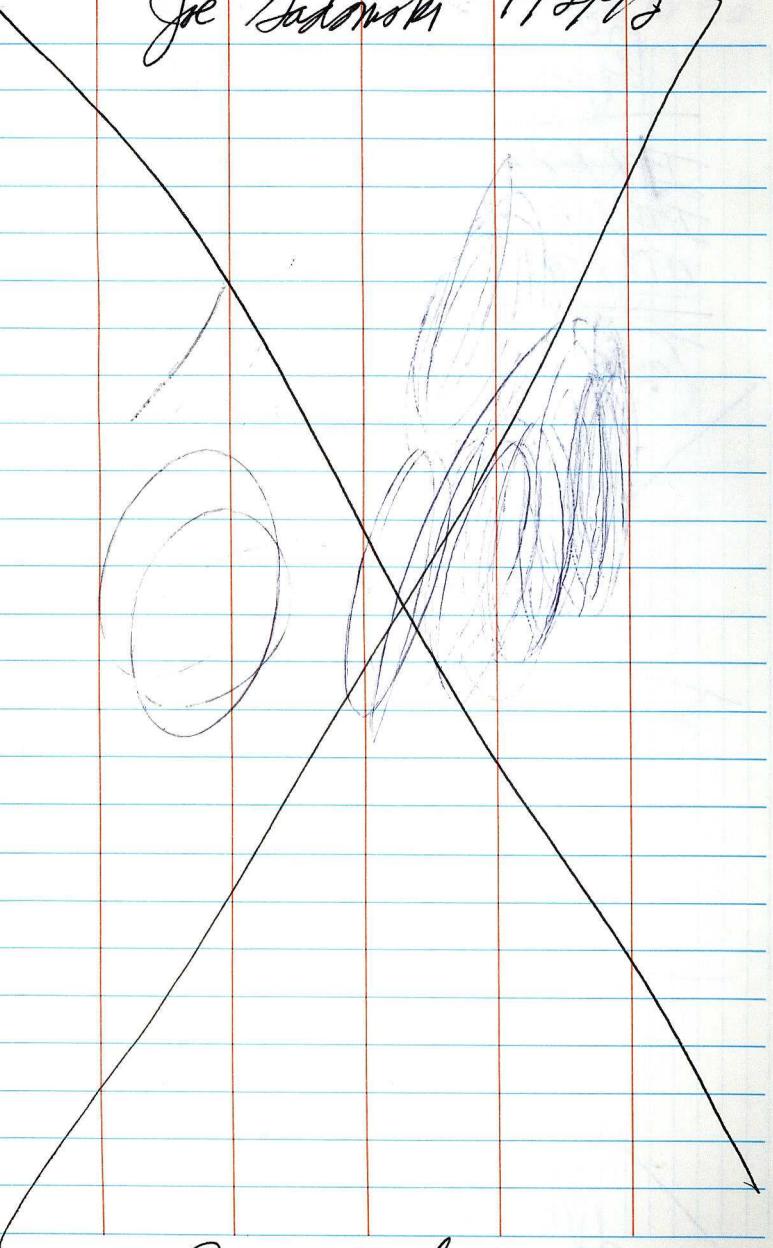
Paperwale (disgarded)

JTR/COC 021575
JTR/COC 021574
OTR/cx 014219

Tags 139029, 139030

Joe Gadowski 4/2/92

Joe Gadowski 4/2/92



Joe Gadowski 4/2/92

Joe Gadowski 4/2/92

Reuben Manville

1/8/92 BK6

SS 01
ELA 62
Extractables

8:49

VOA
ELA 62

8:48

Metals/CN
ME 6/1/21

8:47

Joe Gadowski 4/2/92

Joe Galdowski 4/2/92

SS02
MS1/MSD
ELA 63
Extractables

Soil / with oil

8:55 am

VOA
ELA 63

8:57

Metals/CN
MECN 22

8:58

Joe Galdowski 4/2/92

Joe Galdowski 4/2/92

pile 3

↑ North

SS03 pile 0-4

Distance

ELA 64

Extractables

9:05 JG

9:05

VOA

9:07

Metals/CN
MECN 23

9:08 JG

9:09

Joe Galdowski 4/2/92

Joe Yadowski 4/2/92

White Caps

5504

Lot P10 99010

4-19-91

Seal Broken 1-8-92

Extractables
PLA 65

9:11

VOA

9:13

Metals/Cu 9:15
MECN 24

Resealed with COC
seals 166212 - 166213

Joe Yadowski 4/2/92

Joe Yadowski 4/2/92

Paper work discarded

IIR/COC 21577
OTR/COC 14218

Joe Yadowski 4/2/92

Joe Galonski 4/2/92
1-9-92

166218 Custodx
Seal

NaOH vials

Lot # Y9216049
35 of 48 remain

166219 Nitric Acid

Lot # X8295089
80 of 24 remain

166220 Hydrochloric Acid

Lot # Y1150089
16 of 24 remain

166221-166222

54 of 72 remain
40mL VOT Level 2
3033010 J.G.
30330010

Joe Galonski 4/2/92

Joe Galonski 4/2/92

-16623-16624

4 of 6 remain

80 oz glass amber

Lot # A12951

Cust Seal Aug 27 1990

Joe Galonski 4/2/92